

Hewing of all sorts of plain pelmell *per* 1000 — <sup>sh.</sup> 1 — <sup>d.</sup> 6.  
 Pinning *per* 1000 8d: Pins *p* 1000: 8d — 1 — 4.  
 Three bushels ( *Winchester* measure ) of good Lime will take  
 6. bushels of fresh water sand, and serves to lay on one Poole of  
 work; though much less may serve the turn,  
 300 of lathes to every Poole of work.  
 1000 of Lath nailes to every 300 of Lathes.

An able workman may  $\left\{ \begin{array}{l} \text{lath 1 poole of work} \\ \text{lay on 2000 or more of slate} \\ \text{hew 1500 plaine} \\ \text{pin 4000} \end{array} \right\} \text{by the day.}$

Chequer-work consists in Angles, Circles and semi-circles  
 & which requires no common skill, and time in hewing and  
 laying.

It is worthy observation, that if a side-wall happen to take  
 wet by the beating of the weather, or the like, when no-  
 thing else will cure it, our kerseing with Slate ( which is much  
 used in the curious fronts of houses, especially in Townes ) will  
 quickly remedy it.

### *Some Observations*

*Concerning the odd Turn of some Shell-snails, and the darting  
 of Spiders, made by an Ingenious Cantabrigian and by way  
 of Letter communicated to Mr. I. Wray, who transmit-  
 ted them to the Publisher for the R. S.*

Sir, I Can deny you nothing, and you may doe what you  
 please with the Notes I send you. You would know  
 of me ( you say ) what I have observed concerning the *Odd Turn*  
 of some *Shell-snails* with us in England, and the *Darting of Spi-  
 ders*.

I will tell you then of the *first*, that I have found two sorts  
 of them, easily to be distinguisht one from the other, and  
 from all besides, because the *Turn* of the wreaths is from the  
 right hand to the left, contrary to what may be seen in com-  
 mon Snails. They are very small, and might therefore well  
 escape thus long the more Curious Naturalists; neither of them  
 much exceeding, at least in thickness, a large Oat-corne.

The *first* I thus describe: The open of the shell is pretty round, the second turn or wreath is very large for the proportion, and the rest of the wreaths, about the number of six, are still lessen'd to a point. This Turben or Conical figure is well neare a quarter of an inch; the colour of the shell is dusky, yet when the shrunk animall gives leave, you may see day through it, and then it is of a yellowish colour. These shells are extreame brittle and tender, so that I cannot send them in a Letter: You may guess at the figure, if I tell you, they are some-thing like those of *Aldrovandus de Testaceis*, markt p. 359. *Turbinum levium*.

Of the *second* sort I send you inclosed at a venture halfe a dozen; ( you see, in that I can so plentifully repair the loss of the former, that they are not very rare; ( they seem to be much stronger and thicker shell'd; they are well near half as long again as the other, and as slender; they have the exact figure of Oat-corn, being as it were pointed at both ends, and the middle a little swelled. The open of the shell is not exactly round there being a peculiar *Sinus* in the lower part thereof. I think, you may number about 10. Spires, having their turn from the right hand to the left. The colour of the Shell is of a dark and reddish brown.

There are two sorts of this make described, and with their respective Cutts, in *Fabius Columna*, but ours agree not with them in any thing more than the odd Turn: though 'tis true, that the other, the third there described, and call'd by him *Cochlea Terrestris turbinata et striata*, is very frequent in the road 'twixt Canterbury and Dover, and likewise in some woody parts of the Woles in Lincoln-shire. There are odd differences in this very Snail very remarkable, as its having but one pair of horns (if I mistake not,) as also a hard shelly cover; its manner of wearing that cover &c. which I leave to another opportunity and place.

And to return to our two now described Snails, they, when they creep, lift up the point of their shells towards a perpendicular, and exert with part of their body two pair of horns, as most of their kind doe.

In *March* they are still to be found in paires, *Aristotle* affirms: all

all these kind of creatures to be of a *spontaneous* birth, and no more to contribute to the procreation of one another, than Trees, and therefore to have no distinction of Sex. I have no reason to subscribe to his authority, since I have seen so many of them pair'd, and in the very act of Venery. That they engender then, is most certain; but whether those, that are thus found coupled, be one of them male, and the other female, or rather, as you observ'd, and published to the World in the *Catalogue of Plants* growing Wild about Cambridge, that they are both male and female and do in the act of generation both receive into themselves, and immit a like *penis* (as it seems probable to any man that shall part them) I leave to further and more minute discovery to determine.

Moreover, we find in *Aristotle* a Circle of other parts, but of these no mention at all. However the Romans knew something extraordinary of these kind of Animals, that made them so choice of them, as to reckon them among their most delicate food, and to use all care and diligence to breed and fat them for their Tables at large described to us by *Varro*. Their tast and relish is none, methinks, of the most agreeable.

Of late, comparing *Bussy's Histoire Amoureuse de Gaule* with *Petronius Arbiter*, out of whom I was made to believe, he had taken two of his Letters word for word, besides other Love-intrigues; I found, in running him over, what satisfied me not a little in this very subject of *Snails*; viz. That these very Animals, as well as other odd things in Nature, as *Truffs*, *Mushrooms*, and no doubt too the *Cosfi* or great Worms in the Oak (another *Roman* dainty) were made use of by the Antients to incite Venery. You'll there find, that the distressed and feeble Lover prepares himself with a ragoust of Snails necks (*cervices Cochlearum*;) and indeed in this part it is that these strange *penes's* are to be found.

Mr. *Hook* does as it were promise the Anatomy of this Insect. It were surely worth his pains, and the Learn'd World would be obliged to him for a piece of this nature; nothing,

\* When this was written, accurately done of the inward part of *Malpighius de Bombyce* was not any insect, being yet publisht \*  
yet publisht.

These *Snails* are to be found frequent enough under the loose bark of *Trees*, as old *Willows*, and in the ragged clefts of *Elms* and *Oak &c.* and in no other place else, that I could observe.

You tell me, that it is generally concluded by Philosophers, That the reason of the usuall *Turn* of *Snails* from the left to the right, is the like motion of the *Sun*, and that especially more Nord-ward, there having not been hitherto discovered any in our parts of the contrary *Turn* to the *Sun's* motion. But this is not the only case, where they are out, who consult not the *Stores* of *Nature*, but their own phancy. What I am further about to tell you concerning *Spiders*, is as evident an Instance against them.

The *long Threads* in the *Air* in *Summer*, and especially towards *September*, have been a strange puzzle to the wiser World. It would divert you, though you know them as well as I, if I here reckoned up the ridiculous opinions concerning them; but I omit them, and proceed to tell you the certain and immediate Authors of them, and how they make them.

I say then, that all *Spiders*, that spin in a thread, (those, which we call *Shepherds* or long-legg'd *Spiders*, never do;) are the makers of these threads, so much wondred at, and in such infinite quantities every where.

I sent you the last summer a Catalogue of *thirty* sorts of *Spiders*, that I had distinguished here with us in *England*; and I must confess, I had well near compleated that number, with many other Experiments concerning them, before I discovered this secret. You must not expect here from me any thing more, than what you demanded of me; for as for other Experiments, I reserve them till our meeting.

I had exactly mark'd all the ways of *Weaving*, used by any sorts of them, and in those admirable works I had ever noted that they still let down the *Thread*, they made use of; and drew it after them. Happily at length in neerly attending on one, that wrought a net, I saw him suddainly in the mid-work to desist, and turning his taile into the wind to dart out a thread with the violence and streame, we see water spout out of a spring: This thread taken up by the wind, was in a moment e-

mitted

mitted some fathoms long, still issuing out of the belly of the animal; by and by the Spider lept into the air, and the thread mounted her up swiftly.

After this first discovery, I made the like Observation in almost all the sorts of Spiders, I had before distinguished; and I found the Air filled with young and old sailing on their threads, and undoubtedly seizing Gnats and other Insects in their passage; there being often as manifest signes of slaughter, as leggs, wings of Flies &c. on these threads, as in their webbs below.

One thing yet was a wonder to me, *viz.* That many of these threads, that came down out of the Air, were not single, but snarled and with complicable woolly locks, now more now less; and that on these I did not always find spiders, though many times I had found two or three upon one of them: whereas when they first flew up, the thread was still single, or but little tangled, or, it may be, thicker in one place than another. In the end, by good attention I plainly found, what satisfied me abundantly, and that was this; That I observed them to get to the top of a stalk or bough, or some such like thing, where they exercise this darting of threads into the air, and if they had not a mind to saile, they either swiftly drew it up again, winding it up with their fore-feet over there head into a lock, or break it off short, and let the air carry it away. This they will doe many times together, and you may see of them, that have chains of these locks or snarled thread before them, and yet not taken flight.

Again, I found, that after the first flight, all the time of their sailing they make locks, still darting forth fresh supplies of thred to sport and saile by.

It is further to be noted, that these complicated threads are much more tender, than our house-webbs.

In Winter and at Christmas I have observed them busy a darting, but few of them saile then, and therefore but single threds only are to be seen; And besides, they are but the young ones of last Autumns hatch, that are then employed; and it is more than probable, that the great ropes of Autumne are made only by the great ones, and upon long passages and Summer weather, when great numbers of prey may invite them to stay longer up.

But

But I cease to be tedious: I have many Experiments by me to satisfy many doubts, that may be made, *viz.* of the infinite number of these Insects, and their numberless Increase; and besides, how strangely they are able to furnish and husband great quantities of matter out of so small a bulk &c.

You may expect all from me after another Farmers leisure, which at least I think necessary to confirm to me these; and other things concerning their *Generation* and *Poison*. What I have said at present, is such as I have certainly observed; and you may take the Truth of these Observations for excuse of the ill Texture of them.

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